Patient				Physician
NAME	**DATE OF BIRTH**	**DISEASE**	**STAGE**	**NAME**
Mr John Doe	1990-Nov-29	Healthy / Screening	N/A	Administrator
SPECIMEN	**VIAL IDs**			
20ml Blood	1			

REPORT SUMMARY

Your results indicate a **positive reaction** of your immune system (PBMC)
to cancer cells.

Information

Laboratory Process

- Isolation of Peripheral Blood Mononuclear Cells (PBMCs) using a density gradient medium and centrifugation
- Extraction of mRNA
- Reversed transcription of mRNA to cDNA
- Real-Time Quantitative Polymerase Chain Reaction in more than 90 genes
- Relative Gene Expression analysis
- **Classification with different algorithms (Machine Learning- Classifiers):**
  - Support Vector Machines (SVM)
  - Nearest Neighbor (NN)
  - Ensemble
  - Neural Networks

- Genes which are studied associated with:
  - Cell Cycle Regulation
  - Angiogenesis
  - Apoptosis
  - Self-Repair Mechanisms
  - Signal Transduction pathways
    - Akt Signaling Pathway
    - JAK-STAT Signaling Pathway
    - MAPK Signaling Pathway
    - mTOR Signaling Pathway
    - NF-kB Signaling Pathway
    - P53 Signaling Pathway
    - TGF-β Signaling Pathway
    - VEGF Signaling Pathway etc.

Disclaimers

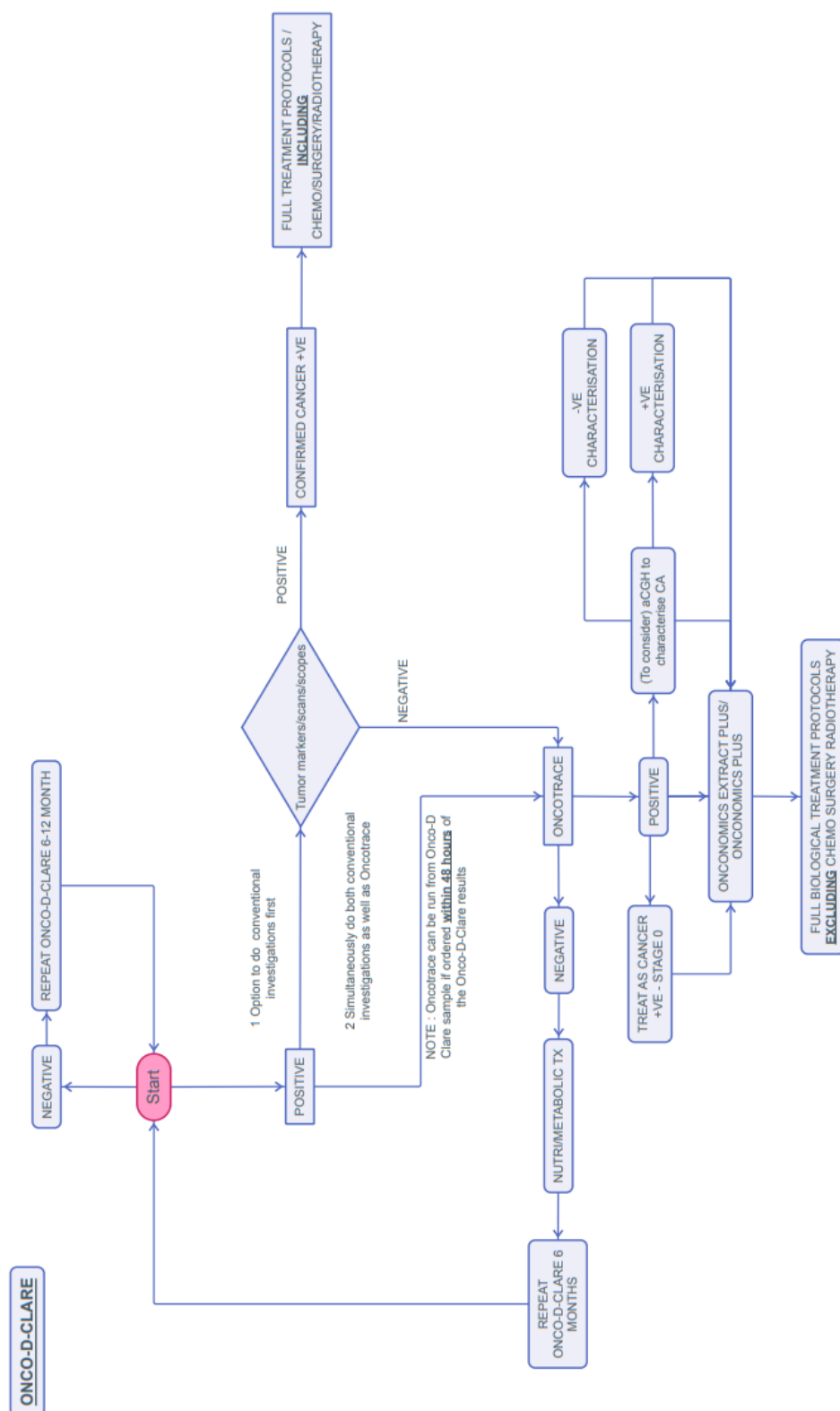The recommended assay is based on the synergy of molecular biology with artificial neural networks.

Onco-D-Clare is not a stand alone test and further investigations are needed to confirm the presence of a tumor in your body. Please work with your practitioner to do so as further investigations are recommended

- Accuracy (%) = 93.34 ± 2.88
- True Positive Rate (%) = 92.40 ± 5.68
- True Negative Rate (%) = 94.78 ± 6.78

Sincerely,

Dr. Ioannis Papasotiriou MD, PhD, SCym

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Onco-D-Clare Flow Chart

Cancer Flow Chart

Cancer flow chart

Normal cells → Conversion of normal to cancer cells → Within the tissue

Within the tissue → CTC undetected

Within the tissue → Immune system pick up presence of cancer → PBMC- onco D Clare- (93%)

Within the tissue → Move onto blood circulation (CTC)

Move onto blood circulation (CTC) → ? ctDNA if there is lysis of cancer cells

Move onto blood circulation (CTC) → CTC pickup - Oncotrace (85%)

Move onto blood circulation (CTC) → Engraftment and migration into tissues / lymph nodes → Grow into a tumor (minimally 1 billon cells) → Stage 1-3

Stage 1-3 → Stage 4 → Distant metastasis

Stage 1-3 → Disease still localised